



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,777	03/24/2004	Seung Min Lee	2080-3242	6072

7590 10/03/2006

JONATHAN Y. KANG, ESQ.  
LEE, HONG, DEGERMAN, KANG & SCHMADEKA  
14th Floor  
801 S. Figueroa Street  
Los Angeles, CA 90017-5554

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,777

Applicant(s)

LEE ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☒ Claim(s) 19-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01 September 2006 has been entered.

### ***Response to Amendment***

2. Applicant's amendment and remarks received 01 August 2006 have been entered.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Houkes (US 4,568,859).

5. Regarding independent claim 19, Figure 1 of Houkes shows a plasma lighting bulb comprising a bulb (1) having grooves (col. 4, ln. 6) of a predetermined depth on at least an inner or an outer surface of the bulb, wherein the grooves from a plurality of

Art Unit: 2879

patterns comprising at least one of circular shapes and polygons; and metal (13, 14, 15) formed in the grooves blocking electromagnetic waves.

6. Regarding claim 20, Houkes discloses the bulb being formed of a transparent material (col. 2, ln. 36).

7. Regarding claim 21, Houkes discloses the transparent material being glass (col. 2, ln. 36).

8. Regarding claim 22, Houkes discloses the transparent material being plastic (col. 2, ln. 36).

9. Regarding claim 23, Figure 1 of Houkes shows the cross-section of the grooves being a semi-circular shape, a V-shape, or a polygonal shape.

10. Regarding claim 24, Figure 1 of Houkes shows the metal in the grooves formed of wires.

11. Regarding claim 25, Figure 1 of Houkes shows the metal filled within the grooves.

12. Regarding claim 26, Houkes discloses the metal including one of copper, aluminum, and silver (col. 2, ln. 5).

13. Regarding claim 27, Figure 1 of Houkes shows the polygons being one of triangles and hexagons.

***Allowable Subject Matter***

14. Claims 15-18 are allowed.

Art Unit: 2879

15. The following is a statement of reasons for the indication of allowable subject matter: Claims 15-18 were allowed in the previous office action. The reasons are repeated in this office action.

16. Regarding independent claim 15, the prior art of record neither shows or suggests a plasma lighting bulb comprising, in addition to other limitations of the claim, a plurality of hexagonal patterns formed on an outer surface of the bulb due to an alignment of a plurality of grooves having a predetermined depth. Due to their dependency upon independent claim 15, claims 16-18 are also allowable for the same reason.

### ***Response to Arguments***

17. Applicant's arguments received 01 August 2006 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bouman (US 4,645,967) discloses an electrodeless low-pressure gas discharge lamp. Vrionis (US 5,397,966) discloses a radio frequency interference reduction arrangement for electrodeless discharge lamps. Postma (US 4,704,562) discloses an electrodeless metal vapor discharge lamp with minimized electrical interference.

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
24 September 2006

  
NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800